

FREQUENCY ACQUISITION AND LOCKING DETECTION  
CIRCUIT FOR PHASE LOCK LOOP

ABSTRACT OF THE DISCLOSURE

A method and apparatus for providing frequency acquisition and locking  
5 detection for a phase lock loop is disclosed. The phase lock loop locks a receiver local  
oscillator to the frequency and phase of an RF carrier to allow data to be recovered from  
the RF carrier in the receiver. An analog mixer in the phase lock loop compares the  
frequency and phase of a receive LO output by a voltage controlled oscillator in the  
phase lock loop and the received RF carrier. A locking indicator dependent on the  
10 result of the comparison indicates whether the phase lock loop is locked. The locking  
indicator is coupled to a comparator. The comparator generates a pulse to close a  
switch in order to inject a periodic sweeping signal generated by a free running multi  
vibrator into the phase lock loop to push the receiver LO into the locking range.